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10/507,311	10/07/2005	Ralf Wehrspohn	14836-46755	4080

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EXAMINER	
WOLLSCHLAGER, JEFFREY MICHAEL	
ART UNIT	PAPER NUMBER
1791	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/507,311	WEHRSPOHN ET AL.	
	Examiner	Art Unit	
	JEFFREY WOLLSCHLAGER	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-76* is/are pending in the application.

4a) Of the above claim(s) *36-74* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-35,75 and 76* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's amendment to the claims filed April 3, 2008 has been entered. Claims 1, 2, 4, 6, 9, 10, 11, 15, 16, 18, 22, 25, 26, 27, 28, 31-34 are currently amended. Claim 3 has been canceled. Claims 75 and 76 are new. Claims 36-74 remain withdrawn from further consideration.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 18 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 18 recites the template is "rotating, preferably at more than 500 rpm". A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 18 recites

the broad recitation “rotating”, and the claim also recites “preferably at more than 500 rpm” which is the narrower statement of the range/limitation. Claim 19 is rejected as a dependent claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4, 6-9, 12-15, 17, 20, 21-31, 35 and 75 are rejected under 35 U.S.C. 102(b) as being anticipated by Cepak et al. (Preparation of Polymeric Micro- and Nanostructures Using a Template-Based Deposition Method, Chem. Mater, 1999, 11, 1363-1367).

Regarding claim 1, Cepak et al. teach a method of forming polymeric microtubules or solid nanofibrils by introducing a polymeric material into the pores of a microporous template. Solvent is evaporated from the solution and depending on the size of the pores; either a hollow or solid fiber is formed. Cepak et al. teach that it is known to employ templates for melts of polymers as well as solutions of polymers (Introduction). The examiner notes that from the teaching of Cepak et al. it is understood that in the cases where a hollow fiber is formed (i.e. larger diameter pores) the polymeric material inherently does not fill the pores completely,

otherwise a solid fiber would be formed from the polymeric solution. (Abstract; page 1363-1364; page 1365, second column – 1366, first column).

As to claim 4, Cepak et al. also teach it is known to employ melts with template synthesis (Introduction).

As to claim 6, the polymeric melt would be cooled necessarily to produce a solidified final hollow tube.

As to claim 7, Cepak et al. employ a polymeric solution (Experimental Section).

As to claim 8, Cepak et al. teach the polymer is solidified by evaporation of the solvent (page 1364, first column).

As to claim 9, Cepak et al. disclose polymers with a molecular weight of 534,000 (Experimental Section).

As to claims 12-15 and 75, Cepak et al. teach the solvent is evaporated. This is a phase transition process and meets the limitation of the claims as supported by the recitation of evaporation of a volatile component in claim 75 (page 1364, first column).

As to claim 17, Cepak et al. employ the same claimed process steps with the same claimed materials. Accordingly, the same claimed effects are realized.

As to claim 20, Cepak et al. teach the solvent is evaporated/extracted from the hollow fiber (page 1364, first column).

As to claims 21-28, Cepak et al. disclose the same template materials as those disclosed in the instant specification (e.g. alumina membrane). Accordingly, the examiner concludes that the templates have the same properties (page 1366, column 1).

As to claim 29, Cepak et al. disclose the same template materials and disclose that the solution is fed into one end and evaporated out of the other end (Experimental Section).

As to claim 30, Cepak et al. exemplify membranes with pore diameters of 1 um and 400 nm that produce hollow fibers. Accordingly, it necessarily follows that the wall thickness is less than the values recited in the claim.

As to claim 31, Cepak et al. disclose polystyrene, as well as various other polymers (Experimental Section).

As to claim 35, Cepak et al. dissolve the template (page 1364, second column) with a solvent.

Claims 1, 2-8, 12-17, 20-35, 75 and 76 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sneddon et al (US 6,478,994).

Regarding claims 1 and 2, Sneddon et al. teach a method of producing a ceramic hollow fiber/nanocylinder from a polymeric precursor wherein a polymeric material dissolved in an organic solvent (i.e. nonpolymeric) and/or melted (col. 3, lines 20-36) is applied to the walls of a porous template, without completely filling the pores (col. 10, lines 22-50; col. 15, lines 7-16). The precursor is pyrolyzed to remove the polymeric material and convert the precursor into a boron based ceramic (col. 7, line 26 - col. 8, line 9). Finally, the porous template is dissolved to free the nanocylinders (col. 14, lines 36-52).

Sneddon et al. disclose immersing the alumina membrane in a “liquid” precursor but do not expressly state what form the liquid is in (col. 10, lines 33-50; Figure 4). Sneddon et al. also teach the precursor “can be dissolved in various organic solvents and/or melted” (col. 3, lines 30-40). From this disclosure in the reference, the examiner concludes that Sneddon et al. anticipate the claim.

In an alternative interpretation, the examiner notes that Sneddon et al. only exemplify a melt spinning technique that is different from the porous template technique. However, the

examiner submits in this alternative interpretation regarding the teaching of the reference that it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed a precursor dissolved in an organic solvent and/or melted since the reference suggests and implies the interchangeability, combinability, and equivalence of dissolving and melting the precursor. (MPEP 2144.06-2144.07).

As to claims 4-6, the polymeric melt disclosed by Sneddon et al. is intrinsically above the solidification temperature of the mixture and is solidified by cooling. As to claim 5, it is noted that the temperature of the melt would have been readily optimized as is routinely practiced in the art.

As to claim 7, Sneddon et al. teach that a solution method may be employed (col. 10, lines 26-31).

As to claim 8, Sneddon et al. pyrolyze the precursor which removes the material (col. 7, lines 27-42; col. 9, lines 62-65).

As to claims 12-16 and 75, Sneddon et al. pyrolyze the precursor material which includes polymers and carriers/organic solvents (col. 10, lines 21-50; col. 7, lines 26-57; col. 5, lines 42-17).

As to claim 17, Sneddon et al. employ the same claimed process steps with the same claimed material. Accordingly, the same claimed effects are intrinsically realized (e.g. porous).

As to claim 20, Sneddon et al. employ a solvent and a polymer as precursor materials. The precursor materials are pyrolyzed (col. 3, lines 31-40; col. 7, lines 26-40).

As to claim 21, Sneddon et al. employ an alumina membrane that produces a parallel array of fibers (col. 14, lines 36-62).

As to claims 22-29, Sneddon et al. employ the same membrane materials as that which are disclosed in the instant specification to produce fibers of the same size (col. 14, lines 36-col. 15, lines 16; col. 10, lines 22-50; Figure 4A-4E).

As to claim 30, Sneddon et al. produce fibers with the same wall thickness (col. 10, lines 21-50; col. 14, lines 36-col. 15, line 16).

As to claim 31, Sneddon et al. disclose polysilanes (col. 5, lines 42 – col. 6, lines 16).

As to claim 32, Sneddon et al. disclose silicon containing materials may be employed (col. 5, lines 42-col. 6, line 16).

As to claims 33 and 34, Sneddon et al. transform the metal containing compound into a ceramic (Abstract).

As to claim 35, Sneddon et al. remove the template, by dissolved/etched (col. 10, lines 21-50).

As to claim 76, Sneddon et al. teach "solvents and/or melt[s]" may be employed (col. 3, lines 31-36). As such, a solvent is not required. Additionally, Sneddon et al. disclose a process that does not employ vacuum (col. 9, line 30 - col. 10, line 50).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 4, 6-9, 12-15, 17, 18, 20, 21-31, 35 and 75 are rejected under 35 U.S.C. 103(a) as being obvious over Cepak et al. (Preparation of Polymeric Micro- and Nanostructures Using a Template-Based Deposition Method, Chem. Mater, 1999, 11, 1363-1367) in view of Moro et al. (US 5,292,515).

Regarding claims 1 and 18, Cepak et al. teach a method of forming polymeric microtubules or solid nanofibrils by introducing a polymeric material into the pores of a microporous template. The solvent is evaporated from the material and depending on the size of the pores; either a hollow or solid fiber is formed. Cepak et al. teach that it is known to employ templates for melts of polymers as well as solutions of polymers (Introduction). The examiner notes that from the teaching of Cepak et al. it is understood that in the cases where a hollow fiber is formed (i.e. larger diameter pores) the polymeric solution inherently does not fill the pores completely, otherwise a solid fiber would be formed from the polymeric solution. (Abstract; page 1363-1364; page 1365, second column – 1366, first column).

In an alternative interpretation of Cepak et al., although the examiner submits it is inherent as set forth above, Cepak et al. do not positively state the pores are not filled. However, Moro et al. teach a method of producing plastic cartridges (i.e. elongated cylindrical articles) having a relatively small diameter (col. 18, lines 38-57) wherein the mold (i.e. template) is not filled and is rotated at speeds of the order of 2150 rpm (Abstract; Figure 1; col. 18, lines 15-57).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have not filled the pores and to have rotated the template/mold employed by Cepak et al., as suggested by Moro et al., for the purpose, as suggested by Moro et al, of producing a hollow article with smooth internal and external surfaces (Abstract).

As to claim 4, Cepak et al. also teach it is known to employ melts with template synthesis (Introduction).

As to claim 5, Cepak et al. teach the method set forth above, but do not teach the melt temperature. However, the temperature of the melt would have been readily determined and optimized depending on the polymer employed and the melt viscosity of the polymer at different temperatures, as is routinely practiced in the art.

As to claim 6, the polymeric melt would be cooled necessarily to produce a solidified final hollow tube.

As to claim 7, Cepak et al. employ a polymeric solution (Experimental Section).

As to claim 8, Cepak et al. teach the polymer is solidified by evaporation of the solvent (page 1364, first column).

As to claim 9, Cepak et al. disclose polymers with a molecular weight of 534,000 (Experimental Section).

As to claim 10, Cepak et al. teach the method set forth above, but do not teach the polydispersity as claimed. However, the polydispersity of the polymers employed would have been determined and optimized based upon the required properties of the final product, as is routinely practiced in the polymer art.

As to claims 12-15 and 75, Cepak et al. teach the solvent is evaporated. This is a phase transition process and meets the limitation of the claims as supported by the recitation of evaporation of a volatile component in claim 75 (page 1364, first column).

As to claim 17, Cepak et al. employ the same claimed process steps with the same claimed materials. Accordingly, the same claimed effects are realized.

As to claim 20, Cepak et al. teach the solvent is evaporated/extracted from the hollow fiber (page 1364, first column).

As to claims 21-28, Cepak et al. disclose the same template materials as those disclosed in the instant specification (e.g. alumina membrane). Accordingly, the examiner concludes that the templates have the same properties (page 1366, column 1).

As to claim 29, Cepak et al. disclose the same template materials and disclose that the solution is fed into one end and evaporated out of the other end (Experimental Section).

As to claim 30, Cepak et al. exemplify membranes with pore diameters of 1 um and 400 nm that produce hollow fibers. Accordingly, it necessarily follows that the wall thickness is less than the values recited in the claim.

As to claim 31, Cepak et al. disclose polystyrene, as well as various other polymers (Experimental Section).

As to claim 35, Cepak et al. dissolve the template (page 1364, second column) with a solvent.

Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cepak et al. (Preparation of Polymeric Micro- and Nanostructures Using a Template-Based Deposition Method, Chem. Mater, 1999, 11, 1363-1367), as applied to claims 1, 4, 6-9, 12-15, 20, 21-31, 35 and 75 above.

As to claim 5, Cepak et al. teach the method set forth above, but do not teach the melt temperature. However, the temperature of the melt would have been readily determined and optimized depending on the polymer employed and the melt viscosity of the polymer at different temperatures, as is routinely practiced in the art.

As to claim 10, Cepak et al. teach the method set forth above, but do not teach the polydispersity as claimed. However, the polydispersity of the polymers employed would have been determined and optimized based upon the required properties of the final product, as is routinely practiced in the polymer art.

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being obvious over Sneddon et al (US 6,478,994), as applied to claims 1, 2-8, 12-17, 20-35, 75 and 76 above.

As to claims 9 and 10, Sneddon et al. teach the method as set forth above. Sneddon et al. do not teach the claimed molecular weight and polydispersity. However, Sneddon et al. teach that the viscosity of the solution is controlled as required and further teach that capillary action is employed to form the nanocylinders (col. 10, lines 3-50). Additionally, Sneddon et al. teach the molecular weight is varied based upon application (col. 6, lines 11-16). Accordingly, one having ordinary skill in the art would have readily optimized the molecular weight and polydispersity of the polymer to achieve a desired and suitable viscosity and capillary action, as is routinely practiced in the art.

As to claim 11, Sneddon et al. teach the crystallinity of the fiber may be controlled by temperature and further teach the temperature to use may be optimized. Therefore, it would have been prima facie obvious to one having ordinary skill to have determined the precise temperature to employ to achieve the desired crystallinity (col. 7, lines 27-57; col. 9, lines 51-54).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sneddon et al (US 6,478,994), as applied to claims 1, 2-8, 12-17, 20-35, 75 and 76 above, in view of Moro et al. (US 5,292,515).

As to claim 18, Sneddon et al. teach the method as set forth above. Sneddon et al. do not teach rotating the template as claimed. However, Moro et al. teach a method of producing plastic cartridges (i.e. elongated cylindrical articles) having a relatively small diameter (col. 18, lines 38-57) wherein the mold (i.e. template) employed to form the cartridge is rotated at speeds of the order of 2150 rpm (Abstract; Figure 1; col. 18, lines 15-57).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have rotated the template/mold employed by Sneddon et al. as suggested by Moro et al., for the purpose, as suggested by Moro et al, of producing a hollow article with smooth internal and external surfaces (Abstract).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cepak et al. (Preparation of Polymeric Micro- and Nanostructures Using a Template-Based Deposition Method, Chem. Mater, 1999, 11, 1363-1367) in view of Moro et al. (US 5,292,515), as applied to claims 1, 4, 6-9, 12-15, 17, 18, 20, 21-31, 35 and 75 above, and further in view of either of Meckling (US 4,004,167) or Goodridge (US 3,607,998).

As to claim 19, the combination teaches the method of claim 18 as set forth above. Cepak et al. do not teach employing ultrasound to act on the liquid in the template. However, Meckling teach a method of rotational molding wherein particles contained within the matrix are subjected to ultrasonic action while the mold is rotated (Abstract; col. 10, lines 62-col. 11, line

11) and Goodridge et al. teach that ultrasonic means may be employed as a method of fusion for forming a hollow article (Abstract; col. 5, lines 56-75).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed ultrasonic action, as suggested by either of Meckling or Goodridge, on the liquid in the template of Cepak et al's method, for the purpose, as suggested by Meckling, that ultrasonic action facilitates movement of particles to desired locations during the molding process, and since Goodridge et al. suggest ultrasonic vibrations may be employed as an equivalent alternative means of fusing materials to produce hollow articles.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sneddon et al in view of Moro et al. (US 5,292,515), as applied to claim 18 above, and further in view of either of Meckling (US 4,004,167) or Goodridge (US 3,607,998).

As to claim 19, the combination teaches the method of claim 18 as set forth above. Sneddon et al. do not teach employing ultrasound to act on the liquid in the template. However, Meckling teach a method of rotational molding wherein particles contained within the matrix are subjected to ultrasonic action while the mold is rotated (Abstract; col. 10, lines 62-col. 11, line 11) and Goodridge et al. teach that ultrasonic means may be employed as a method of fusion for forming a hollow article (Abstract; col. 5, lines 56-75).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed ultrasonic action, as suggested by either of Meckling or Goodridge, on the liquid in the template of Sneddon et al's method, for the purpose, as suggested by Meckling, that ultrasonic action facilitates movement of particles to desired locations during the molding process, and since Goodridge et al. suggest ultrasonic vibrations

may be employed as an equivalent alternative means of fusing materials to produce hollow articles.

Response to Arguments

Applicant's arguments filed April 3, 2008 have been fully considered, but they are not persuasive. Regarding Sneddon et al., applicant argues that the pyrolysis of Sneddon results in the breakdown of the polymeric material and that accordingly Sneddon does not teach or suggest a process of making hollow fibers that require at least one polymer. This argument is not persuasive. As an initial matter, the examiner notes that limitations set forth in the preamble are not generally given patentable weight. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). In the instant case, the recitation "which contain at least one polymer" in claim 1 has not been given patentable weight. Further, where claim 1 does recite employment of a polymer (i.e. step (b)), Sneddon et al. do teach employment of a polymer. As such, Sneddon et al. teach or suggest introducing a polymeric melt and/or solution (i.e. nonpolymeric organic solvent with the melt) into the pores of a template and then pyrolyzing the material to form a substantially ceramic based tube (col. 7, lines 27-31). While the examiner agrees that the pyrolysis causes a breakdown of the polymer, such a process is not excluded from the claims as they are currently presented. Additionally, the examiner notes that optional steps need not be taught by the reference to meet the claim.

Further, regarding Sneddon et al., applicant argues that although Sneddon et al. propose that nanocylinders are produced by incomplete filling of the pores, this is not the real reason. This argument is not persuasive. The examiner notes that attorney arguments can not take the place of evidence in the record. The argument asserts that the real reason hollow fibers are produced by Sneddon is due to shrinkage. However, the examiner submits there is no evidence in the record to refute the teaching of Sneddon that the nanocylinders are produced by incomplete filling of the pores or to refute the teaching of Sneddon et al. that such hollow tubes are considered to be "useful" (col. 15, lines 13-16). Accordingly, the examiner maintains the rejection based upon Sneddon et al.

As to the teaching of Cepak et al. and Cepak et al. in view of Moro et al. applicant argues that Cepak et al. only teach forming fibrils via polymeric melts and that Cepak requires a device for generating a vacuum and employment of a solvent. As an initial matter, the examiner agrees that Cepak requires vacuum. Accordingly, new claim 76 is not rejected over Cepak. Regarding the argument that Cepak only teach forming fibrils via polymeric melts, this argument is not persuasive. As set forth in Cepak, the determining factor of forming fibrils or hollow fibers is the diameter of the pores in the template. As such, hollow fibers would intrinsically be formed in the process set forth by Cepak when the diameter of the pores in the template are of the proper size. Further, the examiner notes that in one interpretation these hollow fibers of Cepak would have a diameter within the values set forth in the preamble; in a second interpretation, the fiber diameters are only set forth in the preamble and are not accorded patentable weight. Accordingly, the examiner submits the claims would need to be further amended to overcome the art of record.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY WOLLSCHLAGER whose telephone number is (571)272-8937. The examiner can normally be reached on Monday - Thursday 6:45 - 4:15, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. W./
Examiner, Art Unit 1791

July 24, 2008

/Monica A Huson/
Primary Examiner, Art Unit 1791